DRAFT AI VACCINATION PROTOCOL

NOTE: FEDERAL AND STATE APPROVAL REQUIRED IN ADVANCE

Inactivated Avian Influenza vaccine is an oil-emulsion product that requires subcutaneous injection of individual birds. Since it is a killed product, the vaccine can be administered safely at any age and will not spread from bird to bird or from parent to offspring. However, maternal antibodies can be passed to progeny, resulting in seropositive test results in progeny for a period of time.

- A pre-vaccination AI test is required. Only flocks that are negative are eligible for vaccination. A flock will be considered negative if, within the previous four days, thirty (30) randomly selected birds per house test negative by AGID on serum and PCR on tracheal swabs.
- The recommended age for initial vaccination is 6-10 weeks of age. Booster vaccination may be applied 4-6 weeks later. The withdrawal time prior to slaughter is 42 days (6 weeks).
- The recommended dosage is 0.5 ml per bird. The vaccine should be warmed to room temperature before using. It is injected subcutaneously in the neck.

CONVENTIONAL VACCINES

- Inactivated homologous vaccines:

  These vaccines contain the same AI strain as the one causing problems in the field. They have been effective in preventing clinical disease and in reducing the amount of virus shed in the environment. The disadvantage of this system is the impossibility of differentiating vaccinated from field-exposed birds, unless unvaccinated sentinels are maintained and monitored on-site. However, the management (identification, bleeding and swabbing) of sentinel birds can be time-consuming and complicated, because they are difficult to identify and they may be substituted with seronegative birds in an attempt to escape restrictions.
- Inactivated heterologous vaccines:

  These vaccines are immunologically similar but not identical to inactivated homologous ones. They differ in that the virus strain used in the vaccine is of the same H type as the field virus but a different neuraminidase (N). Following field exposure, clinical protection and reduction in viral shedding are ensured by the immune reaction induced by the homologous H group, while antibodies against the neuraminidase induced by the field virus can be used as a marker of field infection.

HOMOLOGOUS VACCINATION PROGRAM

- One hundred (100) non-vaccinated birds (or 10 percent of the flock, whichever is less) should be permanently identified with leg bands or wing bands and placed randomly throughout each poultry house to serve as non-vaccinated sentinel birds. All remaining birds will be vaccinated.
- The vaccination crews will follow strict biosecurity procedures.
- Vaccinated flocks will be monitored in the following manner:

- An entrance logbook must be maintained at each poultry house containing the date, time, name, company, purpose, and estimated duration of all visitors to the poultry house.
- Any medication or vaccinations given to birds must be recorded.
- All sentinel birds must be accounted for during the lifetime of the flock. Any morbidity or mortality in sentinel birds must be reported and samples submitted to a lab approved by RI DEM for follow-up diagnosis.
- Thirty (30) serum samples from non-vaccinated sentinel birds will be tested for AI using AGID every two weeks.

HETEROLOGOUS VACCINATION PROGRAM

- All birds will be vaccinated with inactivated vaccine containing a N type different from the challenge virus.
- The vaccination crews will follow strict biosecurity procedures.
- Vaccinated flocks will be monitored in the following manner:
  - An entrance logbook must be maintained at each poultry house containing the date, time, name, company, purpose, and estimated duration of all visitors to the poultry house.
  - Any medication or vaccinations given to birds must be recorded.
  - Morbidity and mortality consistent with Avian Influenza must be reported and samples submitted to a lab approved by DEM for follow-up diagnosis.
  - Thirty (30) serum samples from randomly selected birds will be tested for AI using a differential subtype specific test every two weeks.
- Eggs may be moved from vaccinated flocks as long as the flock continues to test negative for AI. As above, a flock will be considered negative if, within the previous four days, thirty (30) randomly selected birds per house test negative by AGID on serum and PCR on tracheal swabs.
- All birds on vaccinated premises will remain under quarantine for the life of the flock and may only be moved to slaughter under a permit issued by the State Veterinarian.
- If any non-vaccinated sentinel birds or heterologously vaccinated birds test positive for AI or have clinical signs consistent with AI:
  - Tracheal swabs and serum will be collected from 30 sentinel birds (if present) and 30 vaccinated birds per poultry house.
  - Any vaccinated flock determined to be infected with Avian Influenza will be depopulated immediately.